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ABSTRACT

Although China has expanded its system of short-cycle vocational and technical education in recent years to respond to its rapid economic development, most programs are narrowly focused on special technical areas and offer few general education or personal development components. As such, China's technical institutions differ greatly from community colleges in the United States, which offer pre-baccalaureate and transfer, vocational and technical, continuing and adult, and developmental and basic skills education, and provide open access to the community. In reforming its educational system to develop a community college with Chinese characteristics, China should develop a system that is consistent with the philosophy of socialism, meet both social and individual needs through economic development, increase and popularize education in rural and remote areas, strive to increase living standards, and explore more efficient methods of delivering instruction. A short term plan developed by the U.S.-China Education Foundation, a New York-based research and advocacy group, proposes the following: (1) establish a planning committee to establish objectives, timelines, and budgets; (2) undertake exchanges with the United States to share ideas; (3) conduct surveys to establish the educational needs of communities, business and industry, teachers, and students; (4) develop a few 2-year career programs within existing institutions; and (5) establish a governing board and a long-term plan for the future. Contains 13 references. (HAA)

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Planning and Developing Community Colleges in China

by

U.S.-China Education Foundation, New York City

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ABSTRACT

This paper proposes the establishment of community colleges in China. It answers three commonly asked questions: What is a community college?, What are the differences between community colleges and existing vocational/technical schools in China? and What are the needs for community colleges with "Chinese characteristics". It presents that China needs to explore new ways for its education reform to meet increasing needs for advanced skilled labor force to accommodate its rapid economic development and for increasing the nation's post-secondary education levels. It argues that community colleges may be an optimal choice to fulfill these goals.

This paper also raises several concerns about planning community colleges in China, such as, the course system, programs and specialties, scale and size, credit/program articulation, accreditation and the governance system, etc. Finally, it provides considerations for short-term and long-term planning such as the planning committee, surveys for a community profile and policy analysis, and curriculum development. It also suggests that the establishment of community colleges in China is an effective way to collect, allocate and use available resources to meet increasing demands for skilled labor force, to educate, serve and cultivate the local community, and to promote the people's education levels and quality of life.

About the Authors

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Based on Dr. Lynn Belaief s paper *On the Values of Community Colleges in China (1989)* and Dr. Don Watkins' background paper *Community Colleges in China* (1995), the U.S.-China Education Foundation (USCEF), a non-profit organization in New York City in the United States, would like to propose planning for community colleges in China. The USCEF would like to provide professional and technical consultations and assistance in institutional planning and curriculum development in establishing a community college/s.

Introduction

China is facing the increasing needs for educational reform, as its rapid economic development in the past two decades has placed an enormous demand for a more highly educated labor force in its economic reconstruction. Especially, the demand for expanding post-secondary education to increase and cultivate the quality of life, to train specially-educated technical personnel, to enrich culture and arts, and to increase the people's education levels have produced the momentum for education reform at all administrative levels of government. For example, in "Reform of China's Educational Structure" (1985, CPC Central Committee), the section on higher education noted that by the year 2000 China should have developed... "a well-proportioned, rationally tiered system (of higher education) embracing a complete range of disciplines and areas, on a comprehensive scale conforming to its economic strength..." As the 1983's education report: Accelerating the Development of higher Education (China Education, 1992) indicates: "In the drive to achieve the objectives set forth at the Twelfth National Congress

of the Chinese Communist Party, all fronts of endeavor and all regions are seriously aware of the shortages of personnel with professional skills." It is urgently demanded that priority be given to education and education reform to train more qualified personnel to accommodate the socioeconomic development. The urgency of the time line to reach the stated goals has compelled China to move rapidly to diversify its higher education systems in tandem with its development of a combination of a market economy and a planned economy with "Chinese characteristics".

In the context of the open-door policy for China's economic development for more foreign and overseas investments and cooperation, it is necessary not only to make all efforts and try all means to accelerate the development of higher education, but also to pay attention to the actual feasibility. The traditional way of higher education in four-year colleges and universities has prepared a large number of highly educated professionals to serve China's socialist construction in the past four decades. However, the limited number of these traditional institutions compared to the increasing population in China cannot sufficiently meet the increased demands for highly educated professionals, especially the personnel with highly trained techniques.

Facing the reality, on one hand, to increase the number of the four-year colleges is expensive and time-consuming in the pressing need for highly trained professionals. On the other hand, rather than four-year college graduates, rapid economic development requires a large number of entry-level and mid-level service and technical people with direct and immediate technical potential and abilities in the areas of business, commerce, engineering, information technology, health professions, and public services, etc..

As studies in four-year institutions are time-consuming and very concentrated, traditional four-year institutions will not provide enough qualified manpower to meet the increasing needs of the labor market in the foreseeable future. The following figures support the above statement. There was a severe shortage of graduates in some fields of studies such as financial and economic management, law, and administrative services between 1949 and 1979. In some disciplines there were even none. For example, graduates from political science and law studies dropped from

16.6% of the total college graduates in 1949 to 0.3% in 1970's and rebounded to the level of 2. 1 % in 1979/80 (Wang, Yongquan *et al,* 1986). In the mid 1980's, among cadres within the financial economic systems only 2.9% were college graduates. In the People's Bank system 3.0% of the staff were college graduates. Among 17,000 financial and accounting personnel in the building industry system, only 1. 1% were trained as professional accountants (Wang, Yongquan et *al,* 1986). UNESCO's study of 50 countries in 1977 show that the average college graduates in these fields were from 40% to 50%. These figures may have increased along with the world's education development in recent years. As some data demonstrate, although China had 4,521 skilled worker's schools with 1.98 million and 732,000 graduates students by the end of 1995, 70 percent of China's 70 million young workers have only elementary-level skills and only 3.5 per cent have senior-level skills (Cao, 1996). The results of lack of qualified personnel affected socioeconomic development in China in the past decades and continue to do so. Obviously, the lack of qualified personnel in the ranks of cadres in fiscal and economic work became a major factor that resulted in difficulties and mistakes in such areas as economic planning and management in the past. We may ask a question: Should China rely only on the traditional way of higher education or seek new ways to educate qualified technical personnel for its rapid socioeconomic development? In accordance with the Chinese saying, "Walking with two legs", we suggest to explore new ways.

Recently, the Chinese government has passed the Vocational Education Law which will become effective on September 1, 1996. The Ministry of Labor has announced that "the build-up of a skilled and flexible workforce of both blue-and-white collar employees is the purpose of new measures integrating vocational training with employment and promotion opportunities" (Cao Ning, in China Daily, 1996). The new system will encourage job-seekers to adapt themselves to developing market-oriented economy. In recent years, China has expanded its short-cycle specialized institutions and its secondary and post-secondary vocational education institutions, television and broadcasting colleges as well as night schools for workers. However, most

technical/vocational schools have been established for training workers in special technical areas with few components of general education of liberal arts and sciences. Although such career/vocational programs, to some extent, are comparable to the Associate in Applied Sciences (A. A. S.) degree programs or vocational certificates in the United States' community colleges, they are narrow and limited in personal quality development and flexible adaptability. Most of these vocational and technical schools, furthermore, were at the high school level and planned and designed at different municipal, provincial and national levels to accommodate China's five-year plans in a planned economy. However, as the development of a market economy is taking the lead in promoting nation-wide socioeconomic changes and especially local community development, these nation-wide-planned vocational and technical schools may not be sufficient nor efficient to meet the community's immediate and prioritized needs or even long-term needs for local socioeconomic reconstruction.

In the past decade, because of China's open-door policy to stimulate national economic development, local governments and the communities have been engaged in exploring financial investments, business and industrial cooperation, technological exchanges, joint research, education and training with foreign and overseas-Chinese investors, scientists, scholars, business people, and state ministries. These activities have formulated a combination of a market economy with the existing planned economy in China. This development has placed a tremendous demand for specialized labor force in some regions with leading initiatives and imperatives for local socioeconomic development.

As higher education in China has very limited seats compared to its large population, and traditional education is time-consuming, obviously, the skilled labor force required for the flourishing and booming market cannot all be prepared or provided by four-year institutions. Furthermore, most jobs do not need a four-year degree but a combination of special and general knowledge and skills. Therefore, as community colleges provide post-secondary education for career preparation, personal and human development, social role development, and the foundation for continuing adult learning, such demands may be more effectively and efficiently met by

community-college type programs. This paper provides a broad picture of the purposes, functions, and steps required for planning a community college.

Rationale

What is a community college? What are the differences between community colleges and existing vocational/technical schools in China? Is there any possibility to combine the two types of institutions with "Chinese characteristics"? Why is a community college proposed for China's education reform? These are commonly asked questions by leaders and professionals in educational administration and policy-making in China. In answering these questions, this paper will address three parts in the first section: (1) introduction of the missions/functions of community colleges in the USA; (2) differences between community colleges and vocational/technical schools and (3) the needs for community colleges with "Chinese characteristics". The second section will discuss short-term and long-term plans for a community college.

Section I

(1) Functions of Community Colleges in the U.S.

American community colleges developed and boomed to meet the needs for socioeconomic development and equal educational opportunity during the period from 1950's to 1970's. The federal movement's efforts to promote education in sciences and technology at all levels to compete with the Soviet Union in space exploration was also a factor. The 1980's and the early 1990's witnessed the dramatic development and changes in structure and functions of community colleges. Nowadays, most community colleges have developed or have been developing as comprehensive institutions with four distinct missions/functions to serve the local and regional communities. These four basic missions/functions are: (1) pre-baccalaureate/transfer education, (2) vocational/technical education, (3) continuing/adult education, and (4)

developmental/basic skills education. Recently, an additional typical function is to provide open access to the community, which enables a large proportion of low-income students, minority students, part-time students and adult students, especially women students, to have increased opportunity for and access to post-secondary education for a variety of reasons.

Community colleges enroll close to half of all undergraduates in U.S. higher education. Part-time students in college enrollment increased by 20 to 30% in 1970's and 28% from 1983 to 1993 (National Center for Education Statistics, 1993). In fact, the majority of the part-time students are in community colleges. A sizable percentage of minority students who historically had limited access to college education have been attending community colleges. Furthermore, in addition to vocational/career education, community colleges offer transfer opportunities for those who may aspire to continue their college education in four-year colleges. They also offer continuing education for those who wish to update their knowledge and skills to change careers.

Research on and studies of community college have confirmed that community colleges have a positive impact on students' social mobility and lifelong earnings. Lin's (I 993) study with the longitudinal NLS-72 and High School and Beyond databases reveals that during a time span of 13 to 14 years, most community college students, as a group, had gained an average 37% higher salary and higher social status than their counterparts who stopped at the high school level of education. It is essential to note that the increase of personal lifelong earning and social status are very important indicators for a nations' level of education and living standards. Furthermore, personal and occupational development are also important aspects of the civilization of a society. American community colleges have indeed played an important role in socioeconomic development in the U.S.

While all of these are significant, the most significant characteristic of a community college in the U.S. resides in its access. As Cohen and Brawer (1982:48) conclude, for most students in two-year institutions, "... the choice is not between the community college and a senior residential institution; it is between the community college and nothing". Access to post-secondary education and service for local community's social, cultural and economic development are the

invention and major contributions of the U.S. community colleges in post-secondary and higher education. The rapid socioeconomic development with great changes in political and social life from the 1960's to the 1970's' and from 1980's to the present have adequately demonstrated the significance of the existence and services of community colleges in the U.S. To a large extent, such significance may also apply to China's present situation where, on one hand, thousands of qualified high school graduates were excluded from higher education due to the limited seats and the arbitrary cut-off line of the National Standard Higher Education Examinations, and on the other hand, China needs education reform to expand its post-secondary and higher education for rapid socioeconomic development. Admissions to community colleges will not be a big problem in China. This will be elaborated in the later section.

The concept of community colleges is not entirely new in China, since vocational/technical education, part of the functions of American community colleges, has existed for decades in the Chinese education system. In recent years, there is a trend that some enterprises and business officials in China have begun to develop specialized curricula in collaboration with existing institutions of higher education, including private colleges and universities. These tentative programs actually strive for closing the gap between a faster and more efficient way of educating needed technical personnel and the traditional and long-term preparation of specialized college graduates for a rapid development of a combined economy. Local and community needs can be found strongly emphasized by these initiatives. Establishing community colleges, based on these initiatives, is a direction that is worth trying and piloting for China to move forward toward new directions of increasing the people's education levels. The traditional mind for "largeness, prestige and elitism" in education and institutional development needs now to add the new concepts of "practicality, feasibility and adaptability" so that education can play a more efficient and effective role in socioeconomic development in China.

(2) The differences between community colleges and vocational technical schools

2.1. Although scores of post-secondary institutions have been established during the past decade, most vocational/technical schools in China are at the high school or post-junior high level. They are extremely vocational/technical-oriented. The knowledge and skills learned may only be applied to specific work or occupations; whereas community colleges target at fostering students' cognitive abilities such as critical thinking and problem solving with academic components of liberal arts and sciences. Such developed potential through humanities and science education at the post-secondary level may provide students with more opportunities to adapt their abilities and needs to a changing environment and economy.

Without the basic liberal arts and/or general education, vocational/technical education may only provide non-transferable knowledge and skills. Graduates may suffer when the market for a specific field of study is diminishing and the labor force in the field is no longer required.

It is known that human development is one of the major components in community college education. Community colleges with liberal arts and sciences education prepare students as the "whole person" with the capacities of learning, synthesizing, generalizing and critical thinking so that a person may become an effective worker, good citizen, responsible parent and a contributing human being in the society at large.

2.2. Vocational/technical schools offer one track of education to students, which may be a dead-end to one's life-long education. Community colleges offer multiple tracks to students according to students' needs and market demands. These multiple tracks may enable students to transfer into four-year colleges in the future (through program/credits articulations), to continue their life-long learning and update knowledge and skills any time they want to change careers, to go directly into workforce through vocational education and training, and to learn basic skills for human development and contributions to the society.

2.3. Unlike vocational/technical schools, community colleges aim at not only providing specialized technical personnel for immediate needs but also fostering life-long education and increasing educational levels for the people. The long-term benefits for the Chinese people and nation will

be invaluable as education is often regarded as an important vehicle to improve social mobility and quality of life.

2.4. Community colleges have a strong adaptability to the changing economic environment. The core curricula/core courses are designed to have the flexibility for students to switch courses. For example, there are categories for required courses, basic courses, specialty courses and elective courses. Any market changes may affect only part of the curriculum, and it is thus easy to make adjustments for needed courses to adapt to the changing market and community needs.

2.5. Unlike many vocational/technical schools in China, a community college is locally designed and managed by the local governing board to meet local immediate and long-run needs. Students come from local and neighborhood areas and will serve the community after graduation. It is the local community that will benefit most for its investments and efforts. As the college and graduates serve the community, private and public investments in education will be eventually returned to the community. Therefore, both private and public rates of return will be high, which is a good sign for socioeconomic development. As a result, the higher rates of return, the more students and investors will be attracted, which in turn will facilitate institutional development of the college. The mutual benefits are visible and apparent.

2.6. The most important characteristic which distinguishes the community college from the technical/vocational institution is its paramount concern about coordinating individual needs and interests with local community needs. Community colleges are interested in educating students for human and personal development as well as social role development not simply for the labor-force needs. The "whole person" may be able to fit and adapt to different needs and plays an active role in socioeconomic construction. The "technical person", however, may only fit one technical need of the market.

2.7. It is less expensive to run a community college than a residential four-year college or a technical school in the present contingency of scarce resources. Students can commute in local areas, and vocational programs can cooperate with local business and enterprises so that expenses for housing and equipment may be reduced. In addition, the community college has more

potential to raise funds from local business and enterprises as well as the local government in that the benefits for the local community are visible and accountable. For example, cooperative education enables the local enterprises to sponsor education for their immediate needs for well-trained labor force with the indirect benefits of increased productivity and quality from student internships.

Along with the increase in living standards, more and more people will value self-fulfillment, knowledge acquisition, higher learning, and healthy entertainment. Community colleges may function as fund raisers to deliver the needed services for the local community.

2.8. The community college is an appropriate or perhaps the only choice of post-secondary education for many part-time learners, especially for those who work full-time. With a schedule of day and evening course offerings, part-time studies enable the college to make the best use of facilities, space, faculty and curriculum so that the college may be operated efficiently to satisfy students' and the community's needs.

2.9. The community college is not only a place for technical and higher learning but also a center of the community for cultural and art development. The concept of the community center is grounded in the visions of learning, information sharing, communication, fitness and health care, successful citizenship, and wholesome entertainment and leisure. A unified community will enrich its culture and subcultures, facilitate friendly human relations, enhance communication and strengthen the ties for local socioeconomic development. These visions may well fit in the "Chinese characteristics" to construct a modern, peaceful, strong and caring society.

(3) The Need for A Community College with Chinese Characteristics

It is known that China has allocated 2.5 billion yuan (US$301 Million) to help finance "Project 211 ", a plan made by the State Education Commission in 1994 to "turn 100 selected colleges and universities into talent training centers for the 21st Century" (Cui Ning, 1996). We support this project in that these universities can be the leaders for changes in research on science and technology development. However, China ought not neglect "mass education" and the

increase of the levels of post-secondary education among its vast population so that research findings can be turned into industrial and business products. It is the time for China to pay more attention to higher levels of mass education which may represent "Chinese characteristics".

For more than two thousand years, China's education was limited to a narrow class of elite. In the past, Confucius' principal of "Study (education) is for excellence and elitism" has had a great influence on China's education. The efforts to reform and expand education to the common class under the present leadership of the Chinese Communist Party have also been frustrated by the turmoil of the "cultural revolution". For continued rapid socioeconomic development to meet the national goals of the four modernizations, China needs to reflect upon what the Chinese characteristics should be for its higher/post-secondary education. The USCEF recommends that the following points now be considered as appropriate characteristics for China's post-secondary and higher education.

3.1. China's higher education should be consistent with its philosophy of socialism, that is "to serve the people" and to serve the society. Education is not only for the prestigious few but, more important, for the common people. To increase the whole people's post-secondary and higher education level should be one of the major characteristics of education reform.

3.2. China's higher education should meet both social and individual needs in that economic development is aimed at meeting both needs. During the transitional changes of technological development, more qualified mid-level skilled workers are required by business and industry in the pursuit of efficiency and cost reduction for maximal productivity and profits. To educate qualified personnel means that workers possess not only needed skills and techniques but also a better quality and ability for critical thinking and problem solving, and to be creative and satisfied in their work. Moreover, they can also better cope with the changing environment.

3.3. China's urban education has made great progress in the past decade. However, its rural and remote-area education still lag far behind. It is well known that China is characterized by its large rural population (80 percent). To increase and popularize the basic and post-secondary education

in these areas should be the long-term goal and a major characteristic of China's post-secondary and higher education.

3.4. The drive for China's economic development and education reform is not generated by political reasons or industrial revolutions, but by the needs for increasing people's living standards and catching up with the world's average standard for gross national products (GNP). In China, education is often regarded as a major means to make such changes.

3.5. The last but not the least of the characteristics of China's higher education is the outstanding phenomenon of the limited seats for the one fifth of the world's population. Like a few other developing countries, China needs to explore faster and more efficient ways to expand its post-secondary and higher education to meet the increasing needs for its large population and higher levels of mass education.

China is now engaged in the process of implementing its proposed four modernizations, which requires qualified citizens with high productivity and civilization. Education in China is often regarded as the forefront to provide qualified personnel for the four modernizations. Obviously, these include not only technical aspects but also human aspects of socioeconomic development. In a modern society, information and human knowledge grow and change rapidly and constantly. No human can master it all and, therefore, preparation for life-long learning is a major purpose of education. Community colleges can best serve this purpose for a majority of Chinese people in both technical and human development.

Research in psychology provides evidence that in the life span of human development, there are certain psychic tasks to complete in each phase in order to step smoothly into the next phase of life (Cross, 1981). Life-long learning and education can help people easily make adjustments for their personal and social role development. The appropriate and successful adjustment can bring about higher quality and productivity of life, better citizenship, lower crime rates and especially greater success in socioeconomic development for the nation. Therefore, community colleges may efficiently function to provide life-long education for a broad range of the adult population who may not need a higher education degree during their lives. In a sense,

community colleges will be able to increase higher education levels by providing more opportunities to a larger proportion of the population for the needed education in the future. When material life increases in China, life-long and general education may increase people's spiritual life by preparing people as good citizens, productive workers, participating social beings and responsible role models.

Establishing a new level of degrees in higher/post-secondary education by adding the Associate Degree to China's education system will greatly increase the nation's higher education levels and provide more education opportunities to more people. It will considerably increase the people's quality of life and the productivity of the society. The quality of the community college characterized by its features such as inexpensiveness, flexibility, convenience, adaptability, community service and comprehensive functions will open a new horizon for the Chinese government and people to make the best use of resources for socioeconomic development and education.

The Chinese people will, of course, explore their own ways to establish and run a community college, which requires collective and collaborative initiatives and efforts from the central and local governments. A community college with Chinese characteristics also means that apart from policy control by the central government, the college should have the mission to meet the needs of the local government and local areas, as well as individuals. Its governance structure should fit in with the existing education system, but not restricted by it. Its resources should come mainly from the local government, business and enterprises. Its student enrollment should come from the local areas, and the majority of the graduates may serve the local areas, too. Suffice it to say, with careful planning, community colleges can play an important role in promoting social reconstruction and the four modernizations in China.

The USCEF, due to the considerable contributions and hard work by quite a few scholars and experts in education and other fields, has had many years contacts and some experience in planning a community college with Sichuan Province, Shanxi Province and Suzhou City. Most

recently, the USCEF has established the initial contact with Beijing Education Commission and expressed our willingness to assist Beijing in conducting a pilot study of a community college. The USCEF would like to seek broader partnership and cooperation in institutional planning and curriculum development for a community college in China in terms of consultations on the technical aspects of educational planning and administrative expertise. The USCEF has also had connections with the network of the Chinese Overseas Scholars in Education and Institutional Research throughout the U.S., which may also provide assistance in research and evaluation in almost every aspect in education.

Considering the immediate needs, the time factor, and the complexity of planning a new community college, the present paper presents a short-term plan and some thoughts for a long-term plan for a community college. The main goal of the short-term plan for a community college in the context of the Chinese economic development is to first develop a few two-year career programs within an existing institution to meet immediate market needs. These career programs may function as a pilot study in the transitional period for a more comprehensive community college in the near future.

The following basic factors need to be considered in planning a program:

1. The Course System

We propose a combined course system to fit the existing program structure and needs for a community college. In the traditional programs in China, the blocked course system can easily guarantee the contents of the subject matter required by a curriculum. It also facilitates enrollment management and graduation rates, since students are given the required way and also can easily follow the set steps toward their graduation. However, a blocked curriculum is not likely to adapt itself to the changing environment and market demand. The blocked course system will not allow students to have the flexibility to choose majors and courses according to their own needs and abilities, especially for community college students who have more immediate needs for career development. This may bring about the problems of inefficient use of student abilities,

student time, instruction time, space, facilities and teaching resources. It may also hinder students from developing the potential of their learning skills. The USCEF proposes that a course credit system be added to the existing course system, which may provide much flexibility to improve efficiency of the process of learning and education. The credit system will benefit especially part-time students to study at their own paces. It is also suggested that a combination of the two systems with curricula of different kinds be established to meet both short-term and long-term student needs and education goals.

2. Programs and Specialties

Academic programs should be developed based upon the demands of the labor market and employment opportunities in the local areas. Preliminary surveys and market analysis need to be conducted by a planning committee. These, coupled with resource analysis, will determine the size of each program. In general, academic programs can be considered as "hard technology" such as architecture and engineering, and "soft technology" such as business management and computer applications. Soft technology is often highly demanded and short-cycled with rapid changes in economic development. The demand and change for hard technology are relatively stable. Therefore, generally, the cycle of soft technology development is shorter than hard technology. So, it may cost more than hard technology. These factors of cost-effectiveness and technology cycles need to be considered in program development.

3. Scale and Size

Student Full Time Equivalents (FTE's) is generally used to measure the size of a program. The size of a program, the faculty student ratio and the type of academic programs need to be determined by market analysis and resource analysis. The size of program is also relative to cost-effective factors. A small program could be very costly or vise versa in terms of the quality of programs and the demand of the market.

4. Governance and Management Systems

It is advisable to establish a board of trustees to govern a community college. This may be formed by local administrative leaders, professionals, business managers, entrepreneurs and other community members who understanding the local education needs and local business development, and represent the interests of different aspects of the area. The college should be authorized maximum autonomy in decision and policy making to better serve the local needs and to raise funds from local resources. It is suggested that the provincial and municipal governments use financial means and policies to influence but not to control institutional policy making.

The USCEF believes that education reform should focus on developing some marginal discipline areas and increasing levels of higher education to meet social demands, since contemporary economic development requires highly comprehensive knowledge and skills in many marginal disciplines, which may not be provided by a single field of study. Such objectives can very well be met by the proposed two-year community colleges. The following is the short-term plan.

Section II

The short-term Plan

Objectives

The objectives of the short-term plan are:

1. To set up a planning or preparatory committee that will correspond and communicate with all interested parties on a regular basis;
2. To plan and budget exchange visits to discuss important issues between China and the U. S.;

3. To direct the collection of data and survey analysis and set initial policies for a community college;

4. To plan and develop a few career programs based on policy analysis and data analysis; and

5. To establish a governing board and a long-term plan for the future college.

Functions of The Planning Committee

1. All parties, such as the provincial government, the municipal government, an existing institution/s, the special economic zone/district and USCEF, etc. should form a planning committee. This committee will include administrative leaders and professionals with expertise in planning, economy, budgeting, finance, higher education administration and curriculum development.

2. The planning committee will establish objectives, time lines, budget and evaluation for expected results for each phase of planning and timely share information with all parties.

3. The planning committee will discuss and plan the establishment of the Board of Governance/Trustees for a community college. The planning committee may also have the responsibility for designing and developing two-year career programs.

4. The planning committee will delegate the responsibilities for data collection, surveys and data analysis on the needs and demands of a community college as well as curriculum development in the planned areas.

5. The committee will communicate and lobby with the local, provincial and national government for appeals, fund raising, consultations, advisement, planning and exchange visits.

6. The committee will make a long-term plan with detailed objectives, implementation tasks and time lines of each stage of planning and implementation.

Concerns and Suggestions

In general, planning curricula, academic programs or a college requires information about and considerations of access (high school graduates, adult learners or cut-off examinees for the national standard examinations), motive (occupational/vocational training, transfer, adult learning, and basic skills, etc.), status (first-time, continuing, returning, freshmen, and sophomore, etc.), attendance patterns (day or evening, part-time, full-time and semester/quarter systems), subject of program market (student sources and job opportunities), and a host of socioeconomic characteristics of students and resources (finance, personnel and facilities).

Community college planning should take place within an explicit hierarchy of planning themes and goals. This hierarchy provides the basic parameters for all policy and planning decisions and involves all levels -- national, provincial, regional, local and collegial. These themes and goals would be subject to continual revisions as developments, new policies, and evaluative studies dictate. To identify and define the hierarchy of these themes and goals, it is necessary to conduct policy analysis. Knurl and McIntyre (1974:46) have described seven steps of policy analysis for college planning:

> (1) identification of the community or service area and the specific educational need(s) and preference(s) to be serviced by the college; (2) prediction of the number and character of individuals to be served during the period for which the plan is prepared; (3) identification of feasible alternatives for serving individuals; (4) analysis of benefits; (5) analysis of costs; (6) analysis of equity or access; and (7) choice of preferred alternative by decision makers.

Following these steps, at the initial stage, we suggest that a planning committee identify some factors/variables for policy analysis and data analysis in defining the mission and goals for two-year career programs. There are a few major concerns and suggestions as follows:

Surveys

First, a "community profile" of the service area and educational needs of individuals, enterprises and the community should be identified and determined by data collection and data analysis. The community profile for defining the service area and customers/clients should include the following factors:

- various socioeconomic sub-populations such as workers needed in the industrial areas,
- number of high school graduates in the neighborhood school districts, number of higher education institutions and enrollment, number of high school graduates taking higher education examinations, number of college graduates assigned to work in the area, percentage of those admitted to higher education, and number of examinees below the cut-off score and above the academic pass line, etc.;
- the local socioeconomic demographics such as civilian sub-populations, workforce, numbers of business and enterprises (with/without foreign/overseas investments), distribution of salaries, distribution of education levels of workforce, distribution of age groups of workforce, per capita income, parental educational attainment, housing characteristics, and educational background of students (It would be easier to conduct data analysis if all these data could be sorted and retrieved by postal code, if possible);
- geographic location of the proposed programs/college, distance and travel time from college, public transportation.

This community profile may be compiled through data collections from the existing resources such as the Census Bureau, the Municipal Administration Office, the Civil Engineering Planning Bureau, the Labor Bureau and the local Education Commission, etc. It may also be developed by a special study designed to establish an information system or a clearinghouse for on-going and continuous planning, data collection and evaluation. The analysis should be able to generate the trends of characteristics of the community profile.

The assessment of educational needs and preferences of a community may be conducted partly by analyzing data from the existing sources and partly by community sample surveys. The methods of such surveys include questionnaires and personal interviews. The scientific sample survey method should be adopted. Three types of questionnaires may be required for the short-term planning: (1) the business and industry survey, (2) the community sub-population survey, and (3) the high school and college student and faculty survey. These surveys may reveal both individual and public needs for career programs/a community college in the planned area. The following are some specific variables needed to be measured for each survey:

(1) The Business and Industry Survey

The general considerations for the Industry Survey are based on the investigation of skilled personnel needed, skills and technology required, management styles and skills, public relations for development of inter-disciplines or cross-industry development and the trend of future production expansion. The factors/variables can be specified as follows:

- Type of business or enterprises: number of employees, funds and gross production.
- Management structure and personnel: knowledge, skills and technology required;
- Demographics of workers: the total number of workers, age range, education level, gender, years of service, salary range, etc.
- Specialty: knowledge and skills required, equipment and technology required, space required,
- Production: sales, resources, profits, market, recent and future five-year's plans for production development, number of new workers needed in each area annually, and production increase index.
- Public relations: professional associations, market relations and industrial relations.
- Education: scale of on-the-job training programs/night school programs, expenses of training and other alternative methods of training, such as apprenticeship and internship.

(2) The Sub-population Survey

The characteristics of the community profile for the local sub-populations will determine the optimal location of a community college as well as the service area/s. The major concerns are the characteristics and trend of the population, and the needs for post-secondary education and a community center. The location may not appear to be important, if a few career programs are planned within an existing institution. However, location should be a major concern for an independent or a branch community college other than the one within an existing institution in consideration of cooperative education, training and internship with local business and enterprises. The following are the factors for the civilian survey, which needs to be sampled among the neighborhood:

- Demographics: gender, age range, salary range, education level, marital status, number of people in household, number of students in high school, number of youth prepared for post-secondary education within three years, number of adults in workforce, and number of adults for reeducation.
- Educational aspirations: children prepared for high school, technical/vocational schools or higher education, parental efforts for children's education, parent/school communication, parental and public opinions about school education, public opinions about higher education opportunities, opinions about school work/homework.
- Preparations for Post-secondary Education: rank of youth in high schools, rank of high schools in the district, parental support, range of educational expenses per month, parent/teacher contacts, and school activities, - Perceptions of labor market (Research has shown that this is a significant factor affecting students choosing a major and retention): perceptions of job opportunities, perceptions of neighborhood socioeconomic development, expected entry-level and life-time salaries, perceptions of job advancement.

- Career and Personality Development (Research has demonstrated that personality is one of the major factors for students to choose a major): personality orientation/type, career choice, preferred major of study.
- Needs for cultural development and entertainment: values of social roles, local cultural development, political participation, sense of a community as a unified center.

(3) School/College Teacher and Student Survey

The major concerns of the teacher/student survey are to find out individual and public needs for post-secondary education, educational aspirations and attitudes and opinions about the existing services of higher education institutions. The followings are the factors that need to be included in this survey:

- School Type and Location: high school/vocational high school, suburban, city, or rural.
- Demographics: total number of students, ethnic background, distribution of family incomes, number of teachers and non-teaching staff, number of classes, specialties, and grades, quantitative values of equipment, buildings and space, number of graduates each year, distributive destinations of graduates, attendance and attrition.
- Opinions about school work: satisfactions about student work, missions and goals, opinions about school operation and management, parent-teacher relations, rank of students in the neighborhood school districts, average student achievements and contributions in schools.
- External Influence on school: local governance, state and local politics, industrial associations, competition in the market for higher education/industry/business. - Resource allocations: State, City and local governance, financial management, and new resources anticipated.
- Perceptions of future school development, perceptions of changes of the labor market, perceptions of local socioeconomic development.

Access (Admissions)

Access to post-secondary education is a primary concern of educational leaders and planners at the national, state and local levels in the U.S.. In general, by the open admission policy, American community colleges offer the greater potential for access among existing institutions and educational delivery systems regardless of age, gender, race or ethnic group, family income, place of residence or prior educational experience. However, situations may be different in China as many students are screened out of higher education not because of race, family income, or gender, but simply because of an administrative reason: the cut-off scores of the national standard higher education examinations due to limited seats. Therefore, academic qualification for access to a community college in China will not be a big issue since many high school graduates are academically qualified for post-secondary education. A major concern for access to community colleges in China is whether the policy for access should be selective or open. This needs to be addressed in the long-term plan based on data analysis and policy analysis. However, in the short-term plan for the pilot study, the major focus of access should be placed on those who are under the cut-off score of the National Standard Examinations for Higher Education but above the academic pass line. We believe that community colleges will eventually be open to those who are willing and qualified to learn.

Program/Curriculum Development

Defining program/curriculum goals are as important as setting goals and policies for access, as only programs of great interest and values can attract students and guarantee the success of access. Knoell and McIntyre (I 974:112) point out that "Program goals reflect philosophies about the relationship of the individual to society and the importance of the individual interests in relation to manpower needs." In a sense, defining goals of programs must be closely associated with needs analysis in a program design. Because community colleges have

four functions, a two-year curriculum may be developed to balance all four functions or to emphasize one or two major functions at a particular period of time. As for the increasing demand for rapid economic development, the focus of this short-term plan for a two-year curriculum could be placed on career education merged with some general education components.

Curriculum development should be guided by the current needs of the local business and industry development. The present paper suggests that several highly demanded two-year programs now be developed from among such programs as business management, accounting, computer data processing, secretarial science, early childhood education, engineering, electronic engineering, automobile engineering, educational psychology and health professions, etc. This will help meet the great demand for manpower first in big cities and then in rural areas. A combination of blocked course system and course credit system should be worked out to allow more flexibility for the administration to develop both short-term and long-term curricula, for students to choose useful and capably-manageable courses, for the college to make an efficient use of resources, time, and space, and to expedite the education process for optimal outcomes. Along with the combined course credit system, another important consideration is the accreditation system. Without a reliable accreditation system, it is difficult to control and standardize quality, validity and comparability of curricula. Such accreditation is essential so that credits can be accepted by other programs for degree attainment or even by other colleges for transfer purposes, both in China and internationally.

Some Thoughts for the Long-term Planning

A long-term plan or a strategic plan for a community college in China should be based on the above-mentioned short-term plan and policy analysis. More attention should be placed on the following points:

1. Environment and market analysis. This includes the internal and external scan and analysis of market (enrollment market and job placement market) and resource analysis

(financial, personnel, and physical) in order to find out strengths and weaknesses, opportunities and competitions, and possibility and feasibility.

2. Through the above analyses, it is imperative to set up the mission for the college, goals and objectives for each stage of planning.
3. Find measures and criteria of assessment for each stage of the implementation process such as operation, management and control, and evaluate the input, throughput and outcome.
4. Modify and revise the mission, goals and objectives and adjust the implementation process, as much as necessary, according to the formative assessment. The assessment results will also serve as the input for the next cycle of planning.
5. Establish an accreditation system to assure that the college will meet local, national and international quality standards for post-secondary education.

Conclusion

To develop high quality two-year programs, a community college within the framework of an existing university is a promising concept in China. This will greatly reduce the costs of facilities and personnel expenses, and will be easily manageable in the process of planning and implementation. Apparently, in the near future, community colleges in China will make it possible for a larger percentage of the Chinese population to have access to higher education with life-long learning, practical training, career development and human development, and for the local government to make the best use of resources for maximum benefits. The establishment and development of community colleges with Chinese characteristics can be regarded as an intelligent way to collect, allocate and use available resources effectively to educate, serve and cultivate the local community. In response to the rapid socioeconomic development, community colleges in China will tend to develop in a desirable direction by promoting the people's education level and quality of life in the near future.

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